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ABSTRACT

This study explored the hypotheses that (1) young children told (labeled) directly that they were "patient" by adults would demonstrate more subsequent self-control than children given an irrelevant label, and that (2) adult tester expectations regarding the children's self-control would influence only the subjects given the irrelevant label. The self-control of 22 preschool boys and 26 preschool girls was assessed in a task in which each child's accumulation of candy rewards was made contingent upon the child waiting across a period of time to receive the candy. The longer children waited for the candy, the more candy they received. Preschool children directly labeled beforehand as "patient" demonstrated significantly longer delay of gratification than did preschoolers hearing a remark irrelevant to the task. While children not directly labeled as "patient" were somewhat more sensitive to adult expectations than were labeled children, no significant effect of tester expectancy, main or interactive, was found. The results were interpreted in terms of label-induced changes in the preschool children's self-perceptions which influenced their behavior regardless of tester expectancy. (Author/MP)

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Direct Labeling, Tester Expectancy and Delay Maintenance Behavior in Preschool Children

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Running Head: Direct Labeling

Abstract

The influence on children's self-control of labels regarding patience given directly to the children themselves, and of the expectations regarding the children's patience held by adult testers, was investigated. The children's self-control was assessed in a task in which each child's possession of accumulating candy rewards was made contingent upon the stopping of further accumulation. Preschool children directly labeled beforehand as "patient" demonstrated significantly longer delay maintenance than did preschoolers hearing a remark irrelevant to the task. While children not directly labeled as "patient" were somewhat more sensitive to adult expectations than were labeled children, no significant effect of tester expectancy, main or interactive, was found. The results were interpreted in terms of label-induced changes in the preschool children's self-perceptions which influenced their behavior regardless of tester expectancy.

The child's maintenance of self-imposed delay of gratification has been found to be reliably influenced by experimental manipulations aimed directly at the child's cognitive, attentional and verbal abilities (e.g., Mischel, Ebbesen, & Zeiss, 1972; Patterson & Mischel, 1976; Toner & Smith, 1977). In a recent investigation, Toner, Moore and Emmons (1980) noted the effect of providing kindergarten, first-, and second-grade children with a task-relevant label on their subsequent delay maintenance. Children labeled beforehand as "patient" waited significantly longer before terminating a waiting period than did children not given this label. Indeed, labeled children displayed superior patience, not only when the adult who labeled them monitored their waiting behavior, but also when an adult stranger monitored them. Labeled children demonstrated greater patience even when they were alone during the waiting period. With the power of providing task-relevant labels directly to children having been demonstrated, several issues remained unresolved.

First, it had yet to be determined whether the effect of direct labeling would be found with children younger than kindergarten age. The relatively low level of cognitive and linguistic sophistication of the preschool child (Piaget & Inhelder, 1969) has rarely deterred the young child's ability to respond to the wide variety of cognitive and verbal manipulations in previous studies of self-control (e.g., Mischel, et al., 1972; Patterson & Mischel, 1976; Toner & Smith, 1977) though children of this age often prefer and spontaneously make use of inefficient self-

control strategies when left to their own devices (e.g., Toner, 1981; Yates & Mischel, 1979). It was therefore uncertain whether younger children would apply task-relevant labels of a general nature given beforehand to a subsequent task.

Second, Toner, et al. (1980) attributed their results to a modification of the children's self-perception (Bem, 1972). They contended that the labeled children served as their own prophets and modified their subsequent behavior to conform to this label-induced change. However, an essential element of the self-fulfilling prophecy effect as noted by Rosenthal (1966) involves the modification of the behavior of an individual brought about by interacting with another. This other individual has the expectations regarding the likely performance of the first person. Thus, the labeler can bring about compliance by the labeled. Toner, et al. did not systematically vary the expectations of the supervising adults regarding the level of self-control individual children might demonstrate. It is possible, however, that their results may have been due in part to unintended variations in the expectations held by adult experimenters regarding each child's performance on the self-control task. Clearly, to more fully understand the role of labeling in the socialization of children, it was necessary to gauge the impact on children's behavior of task-relevant labels provided to adult supervisors as well as to the children themselves.

It was expected that young children directly labeled as "patient" would demonstrate more subsequent self-control than children given an irrelevant label and that tester expectations regarding the children's self-control

would influence only the subjects given the irrelevant label.

Method

Twenty-two preschool boys and 26 preschool girls served as the primary subjects. These children were aged 38 to 56 months ($\bar{X}$=48.04 months, SD=5.80 months) and all were white and estimated to be of normal intelligence. Twelve female undergraduate students participated as testers of children and one female undergraduate student served as the primary investigator in the study. All of the undergraduates were white and of average to above average intelligence. All participants lived in the vicinity of Stirling, Scotland.

A 2 (tester expectancy) x 2 (subject label) factorial design was employed in which 12 children were randomly assigned to each of the four experimental conditions. There were no fewer than five nor more than six boys within each condition and every child was tested individually. Each of the 12 undergraduates tested one child from each of the four experimental conditions.

The investigation proceded in four sequential phases. In the first of these, during a group meeting with the 12 testers, the primary investigator characterized the present study as observational in nature, the purpose being to investigate what strategies children spontaneously employ to aid their self-control. Thus, testers believed that they would be testing children to enable the primary investigator to freely observe the children.

The second phase involved individual contact between the primary investigator and each of the testers. Before testing convened, the primary

investigator briefed each tester on the rules for the children's delay task and issued each with a supply of small candy rewards. Testers were not furnished with any expectation regarding the probable performance of each of the first two children to be tested. However, as they were preparing to test each of the second pair of children, testers were told by the primary investigator that the child to be tested was "particularly patient on similar tasks." It was not possible to balance the testing order more effectively as any presentations in an order other than that used could have inadvertantly influenced testers' ideas concerning children to whom no expectation of patience should have been attached.

The third phase of the experiment involved individual contact between the primary investigator and each of the children. During the 3 minutes taken to escort the child to the test room, the primary investigator chatted with th child about set neutral topics (e.g., favorite television programs) and, upon arriving at the test room, remarked to those children in the two relevant label conditions, "I hear that you are very patient because you can wait for nice things." The children in the two irrelevant label conditions were told in an identical tone, "I hear you have some very nice friends here at the playgroup." This procedure was essentially identical to that used by Toner, Moore and Emmons (1980). Half the testers tested four children wherein the first and third heard the "patient" label while for the remaining testers, the second and fourth heard the relevant label.

The fourth phase involved the actual testing of the children. Directly after hearing the label, the child was taken into a room and seated,

opposite the tester, at a table. The primary investigator then sat behind the child out of his/her view, after explaining that neither adult could converse with the child once the game had begun. The tester then read the "game rules" to the child:

> "We're going to play a game with sweeties [candies]. When the game starts, I will give one sweet at a time to you. The sweet will be yours when you take it. You can take the first sweet I give you or wait for more to come. I will give you one sweet after each half minute--you can take that, or wait for more if you want to. The last rule for playing this game is that when you take a sweet, the game will finish and you can have the sweeties you waited for. When the game stops, it can't be started again and the game is over. Do you understand the rules of the game? Good."

The start of the game was then announced by the tester who placed one candy in front of the child and said, "You can take this sweet now, or wait for more if you want to." This sequence was repeated every 30 seconds with candies accumulating, one at a time, in a line on the table. When the child took a candy or asked the tester to stop, the tester ended the game and gave the child his/her accumulated rewards. When the game was finished, the child was asked if he/she understood why the game was over and was then escorted from the test room by the primary investigator.

With a maximum delay of 900 seconds having been established, the

number of seconds elapsing between the placement of the first candy on the table and the termination of the game by the child constituted the measure of duration of delay maintenance behavior.

Results & Discussion

Means and standard deviations of the delay maintenance measure for each of the four experimental groups of children are depicted in Table 1.

Insert Table 1 About Here

A preliminary one-way analysis of variance assessing the influence of sex of subject on delay maintenance revealed no such effect ($F(1,46)=0.27$, N.S.) and data from boys ($\bar{x}=355.86$ seconds) and girls ($\bar{x}=412.62$ seconds) were combined for all subsequent analyses. Delay maintenance scores were subjected to a two-way analysis of variance with two levels of label provided to the subject and two levels of tester expectancy. While the variances of the data within the groups were not entirely homogeneous ($F_{max}(4, 11)=6.57$), the parametric analysis was appropriate since the data satisfied all other assumptions for ANOVA and since there were an equal and relatively large number of observations within each group (Hays, 1963).

There was a significant influence on the children's self-control performance attributable to whether the children had been provided with the task-relevant label, $F(1,11)=32.64$, $p<.0001$. Specifically, children given the label regarding patience ($\bar{x}=615.75$ seconds) waited considerably

longer before terminating their delay than did children given the task-irrelevant remark about playgroup friendships ($\bar{x}$=157.46 seconds). Whereas none of the 24 children given the irrelevant remark waited the full 900 seconds, 11 of the 24 children labeled as "patient" beforehand waited the maximum duration. It was clear that the preschool child possesses sufficient cognitive and linguistic capacities to retain and appropriately utilize task-relevant information presented in the form of an explicitly stated expectation directed toward the child regarding his/her likely level of performance. Further, the influence of this label effect did not depend on variations in the behavior by the labeler, as the labeler (the primary investigator) did not test any children. The main effect due to labeling was somewhat stronger in the present study with preschoolers than in the previous study using virtually identical procedures with older children (Toner, et al., 1980). Younger children may indulge in an active but relatively unselective search for adult guidance of their behavior, readily accepting and incorporating information such as was presented in the label. On the other hand, older children have more experience and a richer history of events from which to judge the accuracy of information presented to them by adults.

There was no significant difference in delay maintenance attributable to the expectations provided to adult testers regarding children's likely performance, $F(1,11)=1.20$, N.S. Subjects tested by adults who expected the children to be patient ($\bar{x}$=431.83 seconds) did not delay significantly longer than children tested by adults without this expectation ($\bar{x}$=341.38 seconds). Awareness of subtle expectations of others may depend on more

highly developed levels of social cognition than are evident in preschool children. Piaget and Inhelder (1969) stressed the egocentricity of young children's interpersonal behavior. They contended that the preschool child cannot truly cooperate or accept the viewpoint of another. Therefore, younger children may be incapable of reacting to the subtle influence a tester might be attempting to exert. Thus, the direct manipulation of the child's self-perceptions was more notable than any indirect effects due to tester bias.

Finally, there was no significant interaction between subject label and tester expectancy, $F(1,11)=0.85$, N.S. However, the interaction may have been obliterated by the powerful main effect of the label. Indeed the mean delay maintenance scores of the two groups of children given the "patient" label were equally high while the mean delay maintenance scores of the two groups hearing the irrelevant remark were low and somewhat unequal. Children provided with the task-relevant label beforehand may have been somewhat less sensitive to the differential expectancies of adult testers than were children who were not given the task-relevant label beforehand.

In sum, the manipulation of self-perception by direct labeling can be a very powerful tool for increasing preschool children's ability and/or willingness to delay gratification. Evidently, direct exposure to information which may furnish the recipient with a self-expectation of future performance is sufficient to enhance delay behavior, regardless of the expectations held by presiding adults.

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Footnote

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Table 1

Means and Standard Deviations (in seconds) of Delay Maintenance Behavior of Children in Experimental Conditions (N=48)

TESTER PROVIDED WITH	SUBJECT PROVIDED WITH: Task-relevant Label (Patience)	SUBJECT PROVIDED WITH: Task-irrelevant Label (Friendships)
Expectancy of Patience in Child	$\bar{x}$ = 625.83 (SD = 360.05)	$\bar{x}$ = 237.83 (SD = 262.39)
No Expectancy Regarding Child	$\bar{x}$ = 605.67 (SD = 373.89)	$\bar{x}$ = 77.08 (SD = 145.86)